

REMARKS/ARGUMENTS

Claims 68-89 are pending.

Claims 52, 53, 58, 59, 63-65, and 67 stand rejected under 35 U.S.C. § 102(b).

Claims 60-62 stand rejected under 35 U.S.C. § 103(a).

Claims 52-89 stand rejected under 35 U.S.C. § 112, first paragraph, while claims 58, 72 and 85 are objected to.

Applicants have cancelled claims 52 through 67 without prejudice or disclaimer.

Amendments

Claims 72 and 85 are currently amended to replace the word "nylon" with "polyamides". These amendments were made to address Examiners claim objections under 35 U.S.C. § 112, first paragraph. Support for these amendments is found on page 8 of this response.

Rejection under 35 U.S.C. § 112, first paragraph

Examiner has rejected claims 52-89 under 35 U.S.C. § 112, first paragraph as not being supported by the written description as filed. Applicants have canceled claims 52-67. Applicants respectfully traverse the rejection of claims 68-89.

To satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991).

Claims 52-89 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The examiner stated :

"With respect to newly added claims 52-89, the invention as incorporated into the claims does not have support in the specification for the following reasons:

On page 3 of the specification, the applicants clearly stated that the clay component is exfoliated before it is incorporated into the matrix polymer. The same is stated in paragraph 15 on page 4 of the specification. Newly added present claims require that the clay be exfoliated once it is incorporated into the molten polymer by evaporation of the solvent."

Applicants respectfully submit that the specification does provide support for the claims as currently written. To comply with the written description requirement of 35 U.S.C. § 112 paragraph 1, each claim must be expressly, implicitly, or inherently supported in the originally filed disclosure. (MPEP § 2163. II.A.3.b). Support for the amended claims is expressly provided in the specifications in the originally filed disclosure.

Support for claims 68 and 77, the independent claims in the application, are provided below.

Claim 68 recites in part "... combining said amino acid intercalated hydrotalcite in a dry state with said emulsion comprising at least one molten polymer to make said nanocomposite such that nanoscale exfoliation of said amino acid intercalated hydrotalcite is established and maintained."

Support for claim 68 is found in paragraph 17, lines 7-13 of the specifications, which state:

"In one embodiment, the *dry inorganic* material is combined with the molten polymer using an extruder. While not wishing to be bound by theory, it is postulated that the rapid vaporization of solvent molecules trapped in or associated within the layers of

the inorganic material creates internal pressure that separates the layers, or “platelets” of the inorganic material when the dry inorganic material is combined with the molten polymer. Mixing of the inorganic material and the molten polymer must be sufficient to maintain nanoscale exfoliation of the inorganic material.” [emphasis added]

Claim 77 recites in part “... adding said amino acid intercalated hydrotalcite to a solvent to form a suspension, slurry or paste to induce exfoliation of said amino acid intercalated hydrotalcite; ... ;combining said exfoliated amino acid intercalated hydrotalcite with said emulsion comprising at least one molten polymer to make said nanocomposite such that nanoscale exfoliation of said exfoliated amino acid intercalated hydrotalcite is maintained.”

Support for claim 77 is found in paragraph 8, which states: “In one embodiment of the present invention, the inorganic material is added to a solvent to create a suspension, slurry, or paste. In this embodiment, self-exfoliation occurs in the solvent, and the resulting suspension, slurry, or paste is then combined with the molten polymer to create an inorganic polymer hybrid.”

Support for claim 77 is also found in paragraph 15, lines 1-3, which state: “According to another aspect of the present invention, the exfoliated inorganic material is combined with the molten polymer by any method sufficient to combine the exfoliated inorganic material with the molten polymer.”

Support for claim 77 is further found in paragraph 16, lines 14-17, which state: “According to a preferred embodiment of the present invention, nanoscale exfoliation is induced in an amino-acid intercalated hydrotalcite when it is added to a solvent to form a suspension, slurry or paste. The suspension, slurry or paste is combined with an acid-modified molten polymer using an extruder.”

The remaining claims, 69, 70, 72-76 and 78-89, are dependent claims which are substantially equivalent to original claims. Support for claim 71, where combining is accomplished by an extruder, is specifically stated in paragraph 15 of the specification as a preferred method.

The Applicants respectfully submit that the specification provides *in haec verba* support for claims 68-89. Therefore, Applicants respectfully submit that claims 68-89 are in compliance with 35 U.S.C. § 112, first paragraph. Reconsideration is respectfully requested.

The Applicants, having cancelled claims 52 through 67 without prejudice or disclaimer, respectfully submit that the Examiner's rejection of claims 52-67 is moot.

Claim Objections

Claims 58, 72 and 85 were objected to because they recite nylon as one of the polymers utilized in the nanocomposite of the present invention. The examiner indicated that nylon is actually a tradename and use of tradenames is not proper, since discontinuation of the production of such polymer would render the present claims invalid.

The Applicants have cancelled claim 58. Claims 72 and 85 are amended to substitute "polyamide" for "nylon". Applicants respectfully note that the word "nylon", as used in both common usage and the specification, refers to the family of thermoplastic polyamides. Support for this definition in common usage can be found in many sources. The Merriam-Webster Dictionary (1977) defines nylon as: any of numerous strong tough elastic synthetic materials used esp. in textiles and plastics. Similar definition are found in various internet resources including:

<http://www.webster-dictionary.org/definition/nylon>

Any of several thermoplastic polyamide plastics, comprising a family of high-strength resilient synthetic materials, used mostly in fibers.

A thermoplastic polyamide; a family of high-strength resilient synthetic materials

<http://www.dictionary.net/nylon>

1: a thermoplastic polyamide; a family of high-strength resilient synthetic materials

2: a synthetic fabric

Copies from these web-sites are attached.

Applicant therefore respectfully submits that amended claims 72 and 85 conform to the requirements of 35 U.S.C. § 112, first paragraph, such that the Examiner's objections of claims 72 and 85 should be withdrawn.

Rejection under 35 U.S.C. § 102(b)

Claims 52, 53, 58, 59, 63-65, 67 were rejected under 35 U.S.C. § 102(b) as being anticipated by BEALL (US 5,760,121). Claims 52 through 67 have been cancelled without prejudice or disclaimer, rendering the Examiner's objections to claims 52, 53, 58, 59, 63-65, 67 moot.

Rejections Under 35 U.S.C. § 103(a)

Claims 60-62 were rejected under 35 U.S.C. § 103(a) as being unpatentable over BEALL (US 5,760,121) in view of INOUE (US 0 804 659).). Claims 52 through 67 have been cancelled without prejudice or disclaimer, rendering the Examiner's objections to claims 60-62 moot.

CONCLUSION

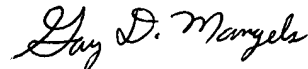
Applicants believe that the foregoing remarks have placed the application in a condition for allowance. Applicants therefore respectfully request prompt action on the claims and allowance of the application. If the Examiner believes that personal communication will expedite prosecution of the application, the Examiner is invited to telephone Applicants' undersigned attorney directly.

AUTHORIZATION

Applicants believe that no extension of time is required to make submission of this response timely. However, in the event that an extension of time is required, Applicants hereby submit a petition for such extension of time as may be necessary to make this response timely. The Commissioner is hereby authorized to charge the necessary fees to deposit account No. 502194. A duplicate of this authorization is enclosed.

Respectfully Submitted,

BUCHANAN INGERSOLL PC



Gary D. Mangels

Registration Number: 55,424



Matthew P. McWilliams

Registration Number 46,922

Buchanan Ingersoll PC
1835 Market Street
14th Floor
Philadelphia, PA 19103-2985
Ph: (215) 665-3813
Fax: (215) 665-8760
Date: July 22, 2004



nylon

Search

What does nylon mean?

we found 2 entries for the meaning of nylon

nylon*noun*

- 1: a thermoplastic polyamide; a family of high-strength resilient synthetic materials
- 2: a synthetic fabric

Source: WordNet (r) 2.0

203 Moby Thesaurus words for "nylon": Aralac, Avisco, Axminster, Celanese, Chemstrand, Dacron, Dynel, Georgette, Harris Tweed, Lastex, Leatherette, Manila, Orlon, Qiana, Revolite, Terylene, Ultrasuede, Velon, Vicara, acetate, acetate rayon, alpaca, angora, arras, astrakhan, baize, bast, batik, blanketing, broadcloth, broadloom, brocade, bunting, calico, cambric, canvas, carpeting, cashmere, castor, cheesecloth, chiffon, chinchilla, chintz, coating, coir, cord, corduroy, cotton, crash, crepe, crepe de chine, cretonne, crinoline, damask, denim, doeskin, drill, drilling, drugget, duck, duffel, felt, flannel, flannelette, flax, fleece, floss, foulard, frieze, fustian, gauze, gingham, gossamer, grenadine, grogram, grosgrain, gunny, haircloth, hemp, herringbone, hessian, homespun, hop sacking, horsehair, huck, huckaback, jersey, jute, kapok, lame, lawn, linen, linoleum, linsey-woolsey, lisle, list, llama hair, loden, longcloth, luster, mackinaw, mackintosh, madras, maline, manta, mantua, marquissette, mat, matting, melton, merino, messaline, mohair, moire, moleskin, mousseline de soie, murrey, muslin, nainsook, nankeen, near-silk, net, netting, oakum, oil silk, oilcloth, organdy, organza, paisley, panne, panne velvet, pepper-and-salt, percale, pique, plaid, plush, polyester, pongee, poplin, print, quilting, radium, raffia, rayon, rayon casheen, rep, rugging, russet, sackcloth, sacking, sailcloth, sarcenet, sateen, satin, say, seersucker, serge, shalloon, shantung, sharkskin, sheers, sheeting, shoddy, shot silk, silk, sisal, spandex, spun rayon, stamin, stammel, stockinette, stuff, suede, swansdown, tabaret, tabby, taffeta, taffety, tapestry, tarpaulin, tartan, terry cloth, tick, ticking, tricotine, tulle, tussah, tussore, tweed, twill, veiling, velours, velure, velvet, velveteen, voile, wash-and-wear fabric, watered fabric, webbing, wool, worsted, yarn, zephyr

Source: Moby Thesaurus II by Grady Ward, 1.0Search for **nylon** @ [Ask Jeeves](#) | [Google](#) | [MSN](#) | [Yahoo](#)Define nylon and 150,000 other words at [dictionary.net](#)[About Us](#) | [Contact Us](#) | [Link to Us](#) | [Terms of Use](#)© Dictionary.net All Rights Reserved
Printer Friendly

Spouses and felons beware:
Love can be a crime.



No married people allowed and we screen for
[Click here](#) and join now - worry free.

That's **Tru**
UNUSUS COMM.

Definition of *nylon*

Advertisement

Nylon from Domino Plastics Co

We have over 20 years experience as buyers and sellers of plastic scrap. We buy thermoplastic raw material in all forms.

Brand Name Hosiery at Bare Necessities

Bare Necessities carries dozens of styles of hosiery from great brand names such as Berkshire, Dkny, Hanes, Round-the-Clock and more, in a secure and tasteful shopping environment.

Nylons at Electrique Boutique

Looking for funky and fashionable stockings? Come to Electrique Boutique and browse our huge selection of thigh highs, fishnets and more.

Nylon at Shopping.com

Find, compare and buy products in categories ranging from sports equipment to clothing. Read product reviews and compare prices with tax and shipping from thousands of online stores.

Webster's 1913 Dictionary

- n. 1. Any of several thermoplastic polyamide plastics, comprising a family of high-strength resilient synthetic materials, used mostly in fibers.
2. A synthetic fabric consisting of fibers of **nylon**[wn1].
3. Stockings made of a thin form of **nylon**{2}, especially full-length stockings either sheer or of varying shades.

WordNet Dictionary

Noun 1. **nylon** - a thermoplastic polyamide; a family of high-strength resilient synthetic materials



2. **nylon** - a synthetic fabric

Related Words

Aralac, Avisco, Axminster, Celanese, Chemstrand, Dacron, Dynel, Georgette, Harris Tweed, Lastex, Leatherette, Manila, Orlon, Qiana, Revolite, Terylene, Ultrasuede, Velon, Vicara, acetate, acetate rayon, alpaca, angora, arras, astrakhan, baize, bast, batik, blanketing, broadcloth, broadloom,

Word:



Browse

Nycticebus tardigradua
Nycticorax
Nycticorax nycticorax
Nyctimene
Nyctitropic
Nyctitropism
Nyctophile
nyctophobia
nycturia
Nydrizid
Nye
Nyentek
nyetwork
Nyiragongo
nylghai
Nylghau
-- **nylon** --
nylon stocking
nylons
nym
nym server
nymph
nympha
Nymphaea
Nymphaea alba
Nymphaea caerulea
Nymphaea lotus
Nymphaea odorata
Nymphaea stellata
Nymphaeaceae
nymphal
Nymphales
nymphalid